

750-acre facility into thriving, cost-controlled, internationally competitive business. They have worked remarkably well on a daily basis with inspectors from the Nuclear Regulatory Commission, as well as with officials from the U.S. Enrichment Corp. The U.S. Enrichment Corp., which manages both the Paducah and the Pikeville, OH, plants, supplies 80 percent of the nuclear fuel for nuclear plants in the United States, and maintains 44 percent of the world enrichment market.

I would like to extend my sincere congratulations and thanks to the employees of the Paducah Gaseous Diffusion Plant. The plant's appropriate slogan is "Survive and Thrive," and they have done just that. The Paducah Gaseous Diffusion Plant not only provides jobs and benefits to western Kentuckians, but it helps the United States remain self-reliant for our nuclear fuel production.●

#### HENRI TERMEER WINS MASSACHUSETTS GOVERNOR'S NEW AMERICAN APPRECIATION AWARD

Mr. KENNEDY. Mr. President, it is a privilege for me to take this opportunity to commend Henri Termeer of Massachusetts on receiving the Governor's New American Appreciation Award from Governor Weld earlier this year.

Henri Termeer is well known to many of us in Congress. He is the chief executive officer and president of Genzyme Corp., the largest biotechnology company in Massachusetts and the fourth largest in the world. When Henri joined Genzyme in 1983, the company had only 35 employees. Under his leadership, Genzyme has grown to over 3,500 employees, including 2,100 in Massachusetts.

Henri was born in the Netherlands and grew up expecting that he would eventually join his father's shoe business. As a young man, he worked in the shoe industry in England, intending to gain training and experience there before returning to work for his father. When he left England, however, he decided to come to America instead of returning to the Netherlands.

After earning a masters degree in business administration at the University of Virginia, Henri joined a pharmaceutical company and spent the next 10 years working in Germany and the United States in various management positions. He left that company in 1983 to become president of Genzyme Corp. and later became the company's chief executive officer as well.

In working with Henri Termeer over the years, I have come to know him as an impressive businessman and as an outstanding leader for the biotechnology industry. He is highly respected in the industry for his knowledge, vision, and commitment, and he has won numerous awards from his peers. As a member of Governor Weld's Council on Economic Growth and Technology and chairman of the Sub-

committee on Biotechnology and Pharmaceutical Development, Henri's leadership was responsible for the adoption of a number of broad initiatives that have made Massachusetts an excellent business environment for the biotechnology industry. At the present time, biotechnology is a \$1.7 billion industry in Massachusetts that employs over 17,000 people.

Henri was selected to receive the Governor's New American Appreciation Award for his charitable and community activities as well as his business leadership. Among his most important civic accomplishments are his efforts to expand learning opportunities for mentally challenged children, to improve science education for minority students, and to train workers displaced from other industries for new careers in biotechnology.

I congratulate Henri Termeer on this well-deserved award. His success in this country is a brilliant new chapter in America's distinguished immigrant heritage and history. He is a modern symbol that the American Dream is alive and well in our own day and generation. The United States needs more New Americans like Henri Termeer.

#### REGARDING: FEDERAL SCIENCE AND TECHNOLOGY INVESTMENT

● Mr. FRIST. Mr. President, as a Senator, I am afforded a unique opportunity to see a broad cross section of our Nation. From that perspective, I have had a chance to reflect upon why our country continues to be the envy of the world. Some might say that we are blessed with abundant natural resources. That is true enough, but in the final analysis, it is the American people that have made, and will continue to make, this country great.

We are a nation drawn from diverse backgrounds and ideas. Still, there is a thread that unites us. Our forefathers, who came to this land to build a new life, created in turn a nation of builders. We build homes, we build businesses and factories, but most of all we build futures; we build hope. And, as a people, we rise to meet a challenge. At no time was that more apparent than during World War II. That crisis forced our Nation to make drastic sacrifices in order to survive. The legacy of those choices has driven our economy and our policies ever since. It is one of those legacies, the Federal investment in science and technology, that concerns me today.

Science and technology have shaped our world. It is very easy to see the big things: putting a man on the moon, breakthroughs in genetic research, and the burgeoning world of the Internet. In today's world technology surrounds us: the computer that makes our cars run, lets us talk on the telephone, runs the stoplights, runs the grocery store checkout, and controls the microwave. Our world runs on technology and the American Federal investment in research and development has played a

significant part in creating it. Much of our economy runs on technology as well. One-third to one-half of all U.S. economic growth is the result of technical progress. Technology contributes to the creation of new goods and services, new jobs and new capital. It is the principal driving force behind the long-term economic growth and increased standards of living of most of the world's modern industrial societies.

The history of the last five decades has shown us that there is a Federal role in the creation and nurturing of science and technology. But the last three decades have shown us something else: fiscal reality. The simple truth is that we just don't have enough money to do everything we'd like. It took some time for us to realize that and by the time we did, we found ourselves in a fiscal situation that is only now being addressed. As a result, discretionary spending is under immense fiscal pressure.

One only has to look back over the last 30 years to illustrate this trend. In 1965, mandatory spending—entitlements and interest on the debt—accounted for 30 percent of our budget, while 70 percent was discretionary. That meant that 70 percent of the budget could be used for roads, education, medical research, parks, and national defense. Today, just 30 years later, the ratio of discretionary to mandatory spending has reversed. Sixty-seven percent of our budget is spent on mandatory programs, leaving 33 percent of our budget for discretionary spending. Current estimates paint an even grimmer future. By 2012, mandatory spending, the combination of interest and entitlement programs, will consume all taxpayer revenues, leaving nothing for parks, education, roads, or the Federal investment in science and technology. Clearly we as a nation, cannot afford to let this happen.

We have both a long-term problem—addressing the ever increasing level of mandatory spending—and a near-term challenge—apportioning a dwindling amount of discretionary funding. This confluence of increased dependency on technology and decreased fiscal flexibility has created a problem of national significance. Not all deserving programs can be funded. Not all authorized programs can be fully implemented. The luxury of fully funding programs across the board has passed. We must set priorities. By using a set of first or guiding principles, we can consistently ask the right questions about each competing technology program. The answers will help us focus on a particular program's effectiveness and appropriateness for Federal research and development funding. This is the information needed to make the hard choices about which programs deserve support and which do not. Through the application of these First Principles, we can ensure that the limited resources the Federal Government has for science and technology are invested wisely.

There are four First Principles:

First, good science. Our Federal research and development programs must be focused, peer and merit reviewed, and not duplicative; the program must solve the right problem, in the right way.

Second, fiscal accountability. We must exercise oversight to ensure that programs funded with scarce Federal dollars are managed well. We cannot tolerate the waste of money by inefficient management techniques, by government agencies, by contractors, or by Congress itself. A move to multi-year budgeting is a step in the right direction. It will work to provide more stable funding levels and give Congress the opportunity to exercise its much needed oversight responsibility.

Third, measurable results. We need to make sure that Government programs achieve their goals. We need to make sure that as we craft legislation that affects science and technology, it includes a process which allows us to gauge the program's effectiveness. As we undertake this, we must be careful to select the correct criteria. We cannot get caught up in the trap of measuring the effectiveness of a research and development program by passing judgment on individual research projects.

Fourth, the Government should be viewed as the funder of last resort. Government programs should not displace private investment, whether from corporations or venture capitalists. It is not the Federal Government's role to invest in technology that has matured enough to make it to the marketplace. When the Government provides funding for any technology investment program, it must take reasonable steps to ensure that the potential benefits derived from the program will accrue broadly and not, for instance, to a single company.

Accompanying the four First Principles, are four corollaries:

First, flow of technology. This year's Science, Technology and Space Subcommittee hearing have provided ample proof that the process of creating technology involves many steps. The present Federal research and development structure reinforces the increasingly artificial distinctions across the spectrum of research and development activities. The result is a set of discrete programs which each support a narrow phase of research and development and are not coordinated with one another. The Government should maximize its investment by encouraging the progression of a technology from the earliest stages of research up to commercialization, through funding agencies and vehicles appropriate for each stage. This creates a flow of technology, subject to merit at each stage, so that promising technology is not lost in a bureaucratic maze.

Second, excellence in the American research infrastructure. Federal investment in research and development programs must foster a close relationship

between research and education. Investment in research at the university level creates more than simply world class research. It creates world class researchers as well. The Federal strategy must continue to reflect this commitment to a strong research infrastructure. We must find ways to extend the excellence of our university system to primary and secondary educational institutions.

Third, commitment to a broad range of research initiatives. An increasingly common theme has emerged from the Science, Technology and Space Subcommittee hearings this year: Revolutionary innovation is taking place at the overlap of research disciplines. We must continue to encourage this by providing opportunities for interdisciplinary projects and fostering collaboration across fields of research.

Fourth, partnerships among industry, universities, and Federal laboratories. Each has special talents and abilities that complement the other. Our Federal dollar is wisely spent facilitating the creation of partnerships, creating a whole that is greater than the sum of its parts.

The principles and corollaries that I have outlined form a framework that can be used to guide the creation of new, federally funded research and development programs and to validate existing ones. An objective framework derived from First Principles is a powerful method to elevate the debate on technology initiatives. It increases our ability to focus on the important issues, and decreases the likelihood that we will get sidetracked on politically charged technicalities. It also serves as a mechanism to ensure that Federal research and development programs are consistent and effective.

The four principles and four corollaries serve different purposes: The First Principles help us evaluate an implementation of a research and development program.

First, good science.

Second, fiscal accountability.

Third, measurable results.

Fourth, Government as funder of last resort.

The corollaries help us establish a consistent set of national goals—the vision of an overall research and development program.

First, creation of a flow of technology.

Second, excellence in the American research infrastructure.

Third, commitment to a broad range of research initiatives.

Fourth, partnerships among industry, university, and federal laboratories.

Mr. President, Congress continues to face a monumental budgetary challenge. Despite our accomplishment this year of passing the first balanced budget since 1969, we have yet to face the most daunting challenge: bringing entitlements under control at a time of huge demographic shifts toward increasing numbers of recipients. Even as

we work toward this difficult goal, we cannot lose sight of the near-term management challenge in making the most of our limited discretionary funds. The Federal investment in research and development has paid handsome dividends in raising our standard of living. It is an investment we cannot afford to pass up.●

#### ARAB-AMERICAN AND CHALDEAN COUNCIL 1997 ANNUAL CIVIC AND HUMANITARIAN AWARDS BANQUET

● Mr. ABRAHAM. Mr. President, I rise today to acknowledge an important event which is taking place in the State of Michigan. On this day, December 5, 1997, many have gathered to celebrate the Arab-American and Chaldean Council [ACC] Annual Civic and Humanitarian Awards Banquet. Each of the individuals in attendance deserve special recognition for their commitment and steadfast support of the Arab-American and Chaldean communities.

I am pleased to recognize the recipients of this evening's awards: Mr. Brian Connolly and Ms. Beverly B. Smith, Civic and Humanitarian, Mr. John Almstadt, 1997 Leadership Award, Senator Dick Posthumus, 1997 State Leadership Award, and Ms. Elham Jabiru-Shayota, Mr. Andrew Ansara, and Mr. George Ansara Entrepreneurs of the Year. Each of these recipients should take great pride in receiving these distinguished awards.

While it is important to pay special tribute to the awardees, it is also essential to honor the citizens of the Arab-American and Chaldean communities. Each of you that has worked to strengthen cultural understanding have contributed greatly to the State of Michigan. For the past 18 years, the ACC has provided tireless support and steadfast dedication to Arabic- and Chaldean-speaking immigrants and refugees. During the past fiscal year, 1996-97, ACC was able to serve over 18,000 clients and cases. This coming year will be an exciting one for ACC. Six of ACC's outreach locations will be consolidated into one location at the Woodward Avenue and Seven Mild Road Area, allowing ACC to serve an even greater client base. Through job placement programs and mental health services, ACC has significantly enhanced the lives of many in our community. As you gather this evening to honor these awardees, I challenge each of you to continue to be active participants in your respective communities.

To the Arab-American and Chaldean-American communities and to the awardees, I send my sincere best wishes. May the spirit of this evening continue to inspire each of you.●